

PATENT SPECIFICATION

719,404



Date of filing Complete Specification: March 4, 1953.

Application Date: Feb 8, 1952.

No. 3327/52.

Complete Specification Published: Dec. 1, 1954.

Index at acceptance:—Classes 18, A2D, A8(B: K), A9B(1: 2), A14; and 125(3), T2B3.

COMPLETE SPECIFICATION

Improvements in or relating to the Capping or Sealing of Cups and other Receptacles of Paper or Cardboard

5 I, HERBERT LEONARD GEE, M.Eng., B.Sc.,
British Nationality, of "Little Hey," Elm-
croft Lane, Hightown, in the County of Lan-
caster, do hereby declare the invention, for
which I pray that a patent may be granted to
me, and the method by which it is to be per-
formed, to be particularly described in and
by the following statement:—

10 This invention relates to the capping or
sealing of cartons, cups, and like receptacles,
of paper or cardboard—and usually of frustro-
conical configuration—adapted to contain
liquid or semi-liquid substances, more parti-
15 cularly ice cream; and my invention has for
its object to provide a closure for such a
receptacle (hereinafter, for convenience of
description only, referred to as "carton")
which shall be hygienic in use, adapted to
20 positively prevent ingress of moisture, dust,
or other foreign matter to the contents of the
carton, and which may be readily removed by
hand as and when desired.

A carton of the type before referred to is
25 closed conventionally by means of a card-
board or like disc which is pressed into the
top of the carton so as to effect its peripheral
engagement with an annular recess provided
immediately below the carton's rim. This
30 closing method, however, possesses a dis-
advantage, amongst others, in that, unless the
sealing discs are perfectly flat (a desideratum
not always attainable under the necessary
conditions of mass production), difficulty is
35 experienced in operating the machines
employed to deal mechanically with the
closures when the cartons are filled.

The present invention aims to obviate the
disadvantages of such a conventional carton
sealing method; and, to this end, provides a
40 closure consisting of a pre-formed cap having
a medial depressed portion, an upwardly and
outwardly directed wall portion and a down-
wardly directed flange or skirt; and said cap
comprising a laminated combination of
45 metallic foil and paper, which latter has been

so pre-treated as to enable heat-sealing of the
cap to the carton when said upwardly and
outwardly directed wall of the medial
depressed portion and the depending flange
or skirt is pressed respectively into contact 50
with the internal and external surfaces of the
carton's rim, the inelastic nature of said metal-
lic foil, and the adhesive property of the pre-
treated paper when heated, providing the
55 means whereby the cap is maintained in
carton-sealing position.

Thus constructed, the cap may be applied
to the top of a carton and a suitably heated
supporting chuck inserted in the recess formed
by the depressed medial portion to enable 60
the cap to be pressed into sealing engagement
with the customary flared or curled rim of
the carton.

I will further describe my invention with
the aid of the accompanying sheet of explana- 65
tory drawings which illustrate, by way of
example and not of limitation, one mode of
embodiment.

In said drawings, in which the thickness
of the cap is exaggerated somewhat for the 70
sake of clarity:—

Fig. 1 is a perspective view of a cap accord-
ing to the invention.

Fig. 2 is a vertical cross section of the cap
in position for fitment to a carton. 75

Fig. 3 is a fragmentary view, similar to Fig.
2, of the cap when pressed into sealing posi-
tion on a carton, and

Fig. 4 is a fragmentary view in perspective
of a sealed carton. 80

Referring now to the drawings, the metal-
lic portion a^1 , a^2 , a^3 of the carton cap closure
is formed from foil aluminium, or other
malleable metal or metal alloy, for example,
two or three thousandths of an inch thick, 85
and includes a medial recessed portion a^1 ,
an upwardly and outwardly directed wall por-
tion a^2 and a depending flange or skirt a^3 .
Said wall portion a^2 of the cap is inclined
at an angle in consonance with that of the 90

[P—

flared rim y of a carton x , and a tab a^4 is provided on the flange or skirt a^1 . b^1 , b^2 , b^3 denotes a lamination of pre-treated paper applied to the underside of the metallic foil.

Thus formed, the cap may be readily applied to the rim y of carton x , as shown in broken lines Fig. 2, and the composite wall and flange a^2 , b^3 , a^3 , b^3 , pressed into sealing engagement with the rim y of carton x by the aid of a heated chuck (not shown) which has been inserted into the recess formed by depressed portion a^1 , b^1 of the cap.

It will be seen that a cap thus constructed and fitted extends over rim y of carton x and is pressed into intimate contact with the internal and external surfaces of said rim to ensure a positive seal against contamination of the contents of the carton.

The tab a^4 provides simple and convenient means whereby the cap may be removed when access to the carton's contents is desired.

In general, the functional requirement is that the cap closure, when pressed into engagement with the carton, shall remain tightly thereon, and this advantage is secured in part by the inelastic "dead-folding"

nature of the metallic foil, and in part by the adhesiveness of the paper lamination.

Said cap may be embossed or coloured with ornamental or/and indentifying characters or insignia.

What I claim is:—

1. A closure for a container or carton of the kind referred to, consisting of a pre-formed cap having a medial depressed portion, an upwardly and outwardly directed wall portion, and a depending flange or skirt; and said cap comprising a laminated combination of metallic foil and paper, which latter has been so pre-treated as to enable heat-sealing of the cap to a carton.

2. A carton closure substantially as hereinbefore described and illustrated in the accompanying drawings.

3. In combination, a carton with closure as claimed in either of the preceding claims.

Dated this 27th day of February, 1953.

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PROVISIONAL SPECIFICATION

Improvements in or relating to the Capping or Sealing of Cups and other Receptacles of Paper or Cardboard

I, HERBERT LEONARD GEE, M.Eng., B.Sc., British Nationality, of "Little Hey," Elmcroft Lane, Hightown, in the County of Lancaster, do hereby declare the nature of this invention to be described in the following statement:—

This invention relates to the capping or sealing of cartons, cups, and like receptacles of paper or cardboard—usually of frustroconical configuration—adapted to contain liquid or semi-liquid substances, as, for example, ice cream; and my invention has for its object to provide a simple and inexpensive one-piece closure for such a receptacle (hereinafter, for convenience of description, referred to as "carton") which shall be hygienic in use, adapted to positively prevent ingress of moisture, dust, or other foreign matter to the contents of a carton, and which may be readily removed by hand as and when desired.

A carton of the type before referred to is closed conventionally by means of a cardboard or like disc which is pressed into the top of the carton so as to effect its peripheral engagement with an annular recess provided immediately below the rim of the carton. This closing method however, possesses a disadvantage amongst others, in that, unless the sealing discs are perfectly flat (a desideratum

not always attainable under the necessary conditions of mass production), difficulty is experienced in operating the machines employed to deal mechanically with the closures when the cartons are filled.

The present invention aims to obviate the disadvantages of such conventional carton sealing method, and in carrying out my invention, a carton closure consists of a laminate combination of metal foil and paper which is preformed to provide a cap of circular, or other required shape, having a medial recess and a depending (when fitted) flange. Thus configured, the cap may be applied to the top of a carton and a supporting chuck inserted in the recess to permit said peripheral flange to be crimped or otherwise pressed into sealing engagement with the customary flared or curled rim of the carton.

It will be seen that a closure component thus constructed and fitted extends over both sides of the carton's rim whereto it is intimately pressed, and thus provides a positive seal against contamination of the contents of the carton.

If desired, said paper lamination may be pretreated in known manner in order to permit of the cap being heat-sealed onto a carton.

In all forms of my closure there may be

included a tab to facilitate its removal from a carton by hand, and said cap may be embossed or coloured with ornamental or/and identifying characters or insignia.

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Leamington Spa: Printed for Her Majesty's Stationery Office, by the Courier Press.—1954.
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2. from which
copies may be obtained.

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1 SHEET

This drawing is a reproduction of
the Original on a reduced scale.

FIG.1.

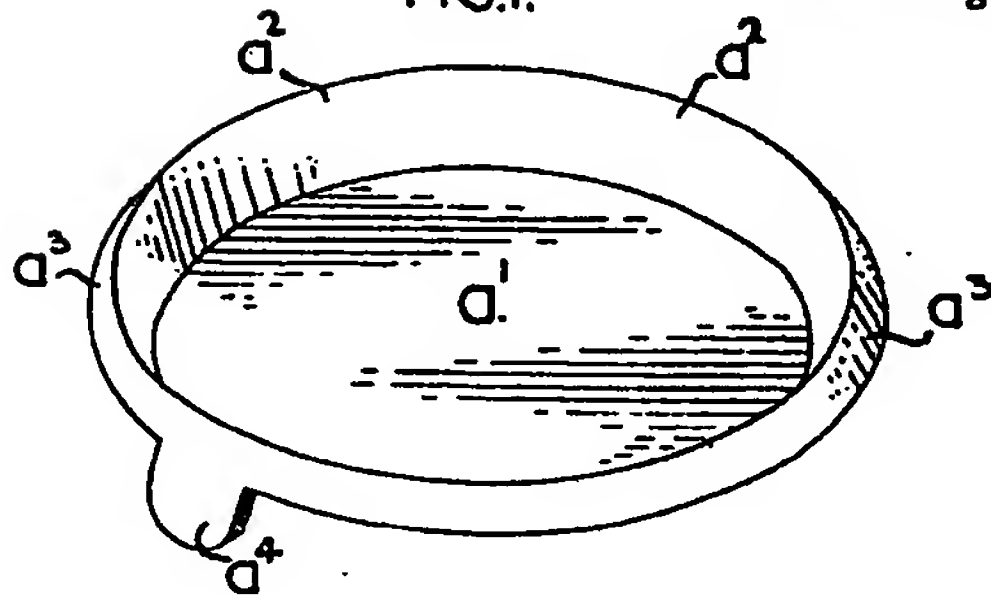


FIG.2.

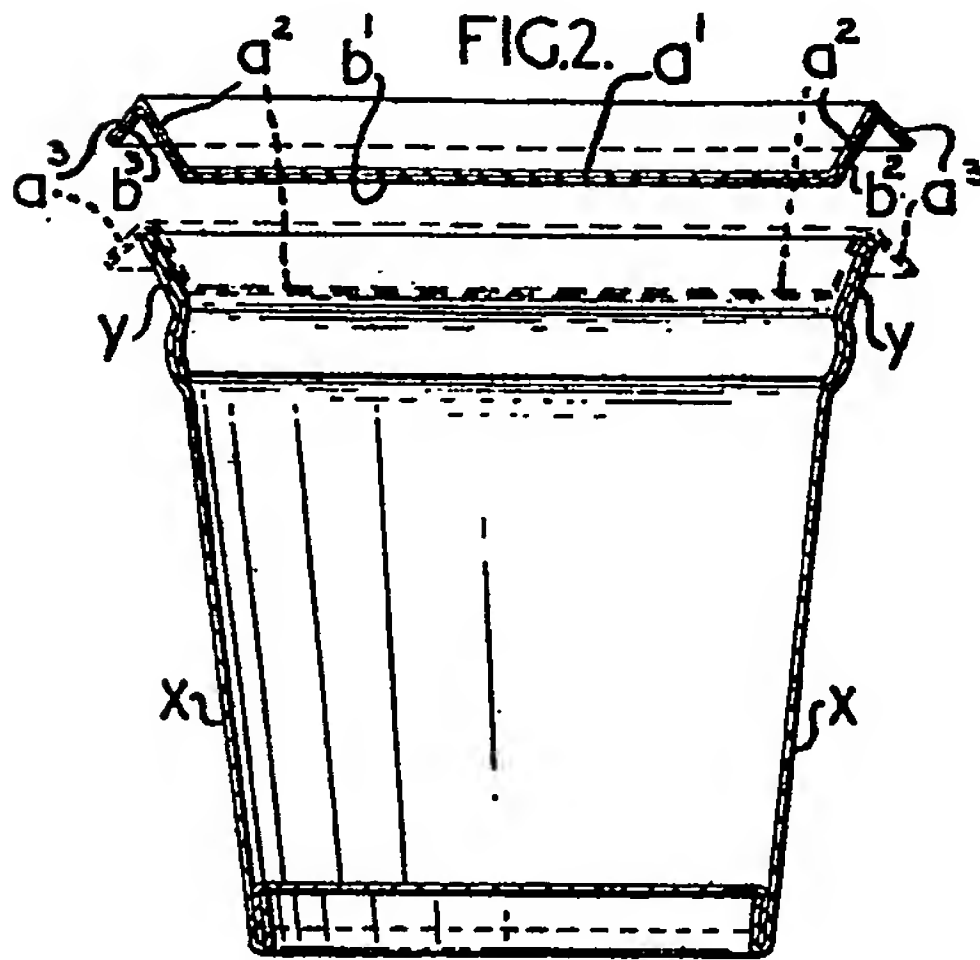


FIG.3.

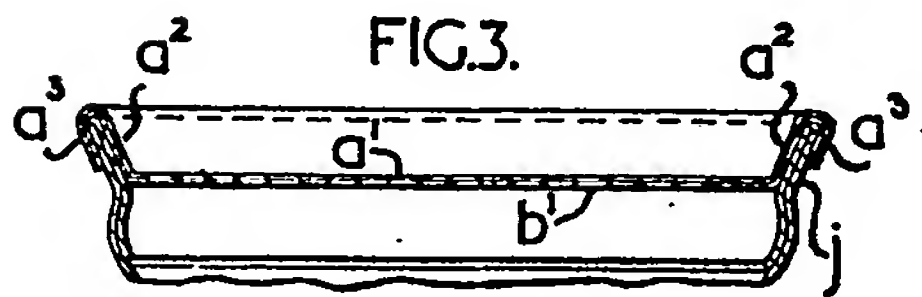


FIG.4.

